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Yingyi Wang Hypromatrix , Inc. 100 Barber Avenue Worcester, MA 01606			EXAMINER LUNDGREN, JEFFREY S	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YINGJIAN WANG and YINGYI WANG

Appeal 2011-001329
Application 09/767,538
Technology Center 1600

Before DONALD E. ADAMS, ERIC GRIMES, and FRANCISCO C. PRATS, *Administrative Patent Judges*.

GRIMES, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to an assay method, which the Examiner has rejected as anticipated and obvious. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

STATEMENT OF THE CASE

Claims 37-39, 43-46, 49, and 53 are on appeal. Claim 37 is the only independent claim and is directed to a “method for bringing two or more reagents in contact with one or more biological targets” by providing an

array comprising two or more reagents, in an arrangement of two or more portions that do not commingle, and “providing one or more said biological targets on a cell growth support,” then carrying out specified steps so that “some or all of each specific reagent portion . . . is transferred to said specific reagent portion’s corresponding biological target immobilized on said cell growth support.” The full text of claim 37 is reproduced in the Claims Appendix (pages 7-8) of the Appeal Brief.

The Examiner has rejected claims 37-39, 43-46, and 53 under 35 U.S.C. § 102(e) as anticipated by Moynihan¹ (Answer 3). The Examiner has rejected claims 37-39, 43-46, 49, and 53 under 35 U.S.C. § 103(a) as obvious based on Moynihan and Balch² (Answer 5). The same issue is dispositive with respect to both rejections, so we will consider them together.

The Examiner finds that Moynihan anticipates the claimed method because it discloses an array comprising the reagent portions required by claim 37 (Answer 4), and also discloses that 96-well microtiter plates have been used to store cell lines (*id. at 3*) and transfer devices such as pipette arrays have been used to deliver liquid samples into microtiter wells (*id. at 4*).

Appellants argue that “[i]n the method of Moynihan, . . . the targets are captured on the arrays. In contrast, in the method of Claim 37, the reagent array on an array support is contacted with targets on a cell growth

¹ Moynihan et al., US 6,365,349 B1, issued April 2, 2002.

² Balch, US 6,038,763, issued July 4, 2000.

support, whereby, the reagents dissociate from the support and [are] transferred into the cells.” (Appeal Br. 12.)

We agree with Appellants that the Examiner has not shown that Moynihan discloses a method that includes providing “biological targets on a cell growth support” and applying reagent portions so that “some or all of each specific reagent portion . . . is transferred to said specific reagent portion’s corresponding biological target immobilized on said cell growth support” (claim 37).

As the “two or more reagents” required by claim 37, the Examiner points to Moynihan’s disclosure of “biomolecule solutions” that include a thickening agent, a biomolecule, and water (Answer 4). The Examiner also points to Moynihan’s disclosures that 96-well microtiter plates have been used to store cell lines and that pipette arrays that correspond to standard 96-well plates have been used to dispense liquid samples (*id.* at 3-4). These teachings, however, do not support the Examiner’s rejections.

Moynihan discloses that its biomolecule solutions “may be used to deposit biomolecule[s] onto a planar surface” (Moynihan, col. 7, ll. 25-26). Moynihan discloses that a preferred biomolecule is a[] nucleic acid polymer” (*id.* at col. 8, l. 57), which “can be covalently attached to a PEI-coated surface” (*id.* at col. 8, l. 65). Moynihan discloses that its “invention provides a method for depositing biomolecule[s] onto a solid support” (*id.* at col. 10, ll. 2-3) such as a silicon wafer (*id.* at col. 10, l. 12) coated with poly(ethyleneimine) (PEI) (*id.* at col. 10, ll. 15, 30) or stainless steel (*id.* at col. 10, ll. 32-33).

Thus, Moynihan discloses that its three-component biomolecule solutions are deposited on substrates that are uncoated or coated with PEI to immobilize the nucleic acid biomolecules. That is, Moynihan discloses that its biomolecule solutions are used to make arrays of nucleic acids, not that they are applied to biological targets on a cell growth support, as required by claim 37.

The Examiner's citation of Moynihan's discussion of 96-well plates and pipette arrays does not persuade us that Moynihan discloses the method of claim 37, because Moynihan does not disclose applying its biomolecule solutions to target biomolecules or cells in a 96-well microtiter plate using a pipette array. The background discussion of microtiter plates and pipette arrays is not directly related to Moynihan's description of methods using its biomolecule solutions. *See In re Arkley*, 455 F.2d 586, 587 (CCPA 1972) ("[F]or the instant rejection under 35 U.S.C. § 102(e) to have been proper, the . . . reference must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference."); *see also Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008) ("[I]t is not enough that the prior art reference . . . includes multiple, distinct teachings that [an ordinary] artisan might somehow combine to achieve the claimed invention."). The Examiner has not shown that those skilled in the art would have understood the cited portions of Moynihan to apply to a single embodiment or even that it would have been obvious to combine

Moynihan's biomolecule solutions with the cell-containing microtiter plates and pipette arrays discussed as background material.

With regard to the rejection based on § 103, the Examiner relies on Moynihan for teaching the limitations of claim 37 (Answer 6-7), and cites Balch to meet the additional limitation of claim 49 (*id.* at 5). The Examiner has cited nothing in Balch that makes up for the deficiencies of Moynihan.

SUMMARY

We reverse the rejection of claims 37-39, 43-46, and 53 under 35 U.S.C. § 102(e) based on Moynihan. We also reverse the rejection of claims 37-39, 43-46, 49, and 53 under 35 U.S.C. § 103(a) based on Moynihan and Balch.

REVERSED

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